

WHAT IS CLAIMED IS:

1.    A massage system comprising:

5        a motor having an output shaft;

         at least one sliding block connected to the output shaft;

         at least one bellows, such that each bellows is  
10        connected to a corresponding one of the sliding blocks and  
         moveable between an extended position and a retracted  
         position, wherein when each bellows is moved from the extended  
         to the retracted position air is expelled from the bellows,  
         and wherein when each bellows is moved from the retracted to  
15        the extended position air is taken into the bellows; and

         wherein operation of the motor causes each sliding  
         block to move between a first position and a second position,  
         such that in the first position each sliding block compresses  
20        a corresponding one of the bellows to the retracted position  
         and in the second position each sliding block releases said  
         corresponding one of the bellows to the extended position.

2.    The massage system of claim 1, wherein the at least  
25        one sliding block comprises a first sliding block and the at  
         least one bellows comprises a first bellows and a second  
         bellows each connected to the first sliding block.

3.    The massage system of claim 2, wherein when the  
30        first sliding block is in the first position the first bellows  
         is in the retracted position and the second bellows is in the  
         extended position and wherein when the first sliding block is  
         in the second position the first bellows is in the extended  
35        position and the second bellows is in the retracted position.

4.    The massage system of claim 3, wherein the at least one sliding block comprises a second sliding block and the at least one bellows comprises a third bellows and a fourth bellows each connected to the second sliding block.

5.    The massage system of claim 4, wherein when the second sliding block is in the first position the third bellows is in the retracted position and the fourth bellows is in the extended position and wherein when the second sliding block is in the second position the third bellows is in the extended position and the fourth bellows is in the retracted position.

6.    The massage system of claim 1, wherein the output shaft of the motor comprises at least one eccentrically mounted bearing, such that each bearing is connected a corresponding one of the sliding blocks to move said corresponding one of the sliding blocks between the first and second positions.

7.    The massage system of claim 1, wherein the output shaft of the motor comprises at least one eccentrically mounted bearing that rotates about a substantially elliptically shaped slot in a corresponding one of the sliding blocks to move said corresponding one of the sliding blocks between the first and second positions.

8.    The massage system of claim 1, wherein the at least one sliding block comprises a first sliding block and a second block and wherein the output shaft of the motor comprises two

eccentrically mounted bearings, such that each bearing is  
connected a corresponding one of the sliding blocks to move  
5      said corresponding one of the sliding blocks between the first  
and second positions.

9.      The massage system of claim 1, wherein the at least  
10      one sliding block comprises a first sliding block and a second  
block and wherein the output shaft of the motor comprises two  
eccentrically mounted bearings that each rotate about a  
substantially elliptically shaped slot in a corresponding one  
of the sliding blocks to move said corresponding one of the  
15      sliding blocks between the first and second positions.

10.      The massage system of claim 9, wherein the two  
eccentrically mounted bearings are offset by approximately  
20      ninety degrees with respect to each other.

11.      The massage system of claim 1, further comprising at  
least one inflatable bladder connected to each bellows, such  
that when each bellows is moved from the extended to the  
25      retracted position air is expelled from the bellows and enters  
a corresponding one of the at least one inflatable bladders,  
and wherein when each bellows is moved from the retracted to  
the extended position air is extracted from said corresponding  
30      one of the at least one inflatable bladders and enters the  
bellows.

12.      The massage system of claim 11, wherein at least one  
35      of bellows is connected to more than one inflatable bladder.

13. The massage system of claim 11, wherein at least one  
of the inflatable bladders is disposed within an expandable  
5        pad.

14. The massage system of claim 1, wherein the output  
shaft of the motor is a cam shaft that comprises at least one  
cam, such that each cam is connected a corresponding one of  
10        the sliding blocks to move said corresponding one of the  
sliding blocks between the first and second positions.

15. The massage system of claim 1, wherein the output  
15        shaft of the motor is a cam shaft that comprises at least one  
cam that rotates about a substantially elliptically shaped  
slot in a corresponding one of the sliding blocks to move said  
corresponding one of the sliding blocks between the first and  
20        second positions.

16. The massage system of claim 1, wherein the at least  
one sliding block comprises a first sliding block and a second  
block and wherein the output shaft of the motor is a cam shaft  
25        that comprises two cams, such that each cam is connected a  
corresponding one of the sliding blocks to move said  
corresponding one of the sliding blocks between the first and  
second positions.

17. The massage system of claim 1, wherein the at least  
one sliding block comprises a first sliding block and a second  
block and wherein the output shaft of the motor is a cam shaft  
that comprises two cams that each rotate about a substantially  
35        elliptically shaped slot in a corresponding one of the sliding

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blocks to move said corresponding one of the sliding blocks between the first and second positions.

5           18. The massage system of claim 17, wherein the two cams are offset by approximately ninety degrees with respect to each other.

10           19. A massage system comprising:  
            a motor having an output shaft;  
            at least one sliding block, wherein each sliding  
block is movable between a first position and a second  
15 position;

            at least one bellows, such that each bellows is connected to a corresponding one of the sliding blocks and moveable between an extended position and a retracted  
20 position, wherein when each bellows is moved from the extended to the retracted position air is expelled from the bellows, and wherein when each bellows is moved from the retracted to the extended position air is taken into the bellows;

            wherein the at least one sliding block comprises a  
25 first sliding block and the at least one bellows comprises a first bellows and a second bellows each connected to the first sliding block;

            a first bearing eccentrically mounted on the output  
30 shaft of the motor, wherein operation of the motor causes the first bearing to rotate about a substantially elliptically shaped slot in the first sliding block, causing the first sliding block to move between the first and second positions;  
and  
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wherein when the first sliding block is in the first position the first bellows is in the retracted position and the second bellows is in the extended position and wherein when the first sliding block is in the second position the first bellows is in the extended position and the second bellows is in the retracted position.

10 20. The massage system of claim 19 wherein:

the at least one sliding block comprises a second sliding block and the at least one bellows comprises a third bellows and a forth bellows each connected to the second sliding block;

the massage system further comprises a second bearing eccentrically mounted on the output shaft of the motor, such that operation of the motor causes the second bearing to rotate about a substantially elliptically shaped slot in the second sliding block, causing the third sliding block to move between the first and second positions; and

when the second sliding block is in the first position the third bellows is in the retracted position and the fourth bellows is in the extended position and wherein when the second sliding block is in the second position the third bellows is in the extended position and the fourth bellows is in the retracted position.

30 21. A massage system comprising:

a motor having an output shaft that is a cam shaft;  
at least one sliding block, wherein each sliding block is movable between a first position and a second position;

at least one bellows, such that each bellows is  
connected to a corresponding one of the sliding blocks and  
5        moveable between an extended position and a retracted  
position, wherein when each bellows is moved from the extended  
to the retracted position air is expelled from the bellows,  
and wherein when each bellows is moved from the retracted to  
10        the extended position air is taken into the bellows;

          wherein the at least one sliding block comprises a  
first sliding block and the at least one bellows comprises a  
first bellows and a second bellows each connected to the first  
sliding block;

15        wherein operation of the motor causes a first cam on  
the cam shaft to rotate about a substantially elliptically  
shaped slot in the first sliding block, causing the first  
sliding block to move between the first and second positions;  
20        and

          wherein when the first sliding block is in the first  
position the first bellows is in the retracted position and  
the second bellows is in the extended position and wherein  
when the first sliding block is in the second position the  
25        first bellows is in the extended position and the second  
bellows is in the retracted position.

          22. The massage system of claim 21 wherein:

30        the at least one sliding block comprises a second  
sliding block and the at least one bellows comprises a third  
bellows and a forth bellows each connected to the second  
sliding block;

35        operation of the motor causes a second cam on the  
cam shaft to rotate about a substantially elliptically shaped

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slot in the second sliding block, causing the third sliding block to move between the first and second positions; and

5               when the second sliding block is in the first position the third bellows is in the retracted position and the fourth bellows is in the extended position and wherein when the second sliding block is in the second position the  
10       third bellows is in the extended position and the fourth bellows is in the retracted position.

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